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ABSTRACT

The effects of assigned status were investigated in same-sex competition with male (N=40) and female (N=80) college subjects. Those randomly assigned to high status improved in reaction time performance, while subjects randomly assigned to low status suffered a decrement. Contrary to expectations, in mixed-sex competition (fear of success arousal condition) subjects in both high and low status improved in performance. Feedback on performance did not account for these effects. Criterion performance and personal aspirations were significantly correlated and group goals were significantly higher than personal goals. Males had significantly faster reaction times and set higher goals than females. Status did not significantly affect achievement motivation, anxiety, or fear of success. (Author)

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Effects of Assigned Status: Performance, Aspirations, Motivation, Anxiety, and FOS[1]

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Purpose

The purpose of this study is to examine the effects of randomly assigned status on females as well as males (Burnstein and Zajonc (1965) studied the effect of status on males only); the differences between personal and groups goals (Zander and Forward, 1968); and the effects of fear of success (FOS) arousal (Horner, 1968).

The hypotheses are: 1) status influences RT performance in both males and females in a manner consistent with the role assigned, i.e., high status, high performance; low status, low performance; 2) performance and individual aspirations are positively correlated; 3) group goals are similar for Ss in all statuses; 4) high status results in higher need achievement (n Ach) and lower anxiety than low status; 5) FOS arousal slightly depresses performance, goal setting, and n Ach while increasing anxiety in high status females; 6) low status females under FOS arousal do not differ from other low status females.

Subjects

The subjects were 80 female and 40 male college students from a university in Central New Jersey. In Conditions 1 and 2 (no FOS arousal, same sex competition) there were ten groups of four males each and ten groups of four females each respectively; in Condition 3 (FOS arousal, mixed sex competition) there were ten groups of four females each.

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Procedure

A modified version of the Group Reaction Time Apparatus described in Zajonc (1965) was used. Briefly, it consists of individual panels, stimulus lights, failure lights and reaction keys. Simple reaction times were observed for same sex four-S groups. Intervals between the ready signal and stimulus onset were 3, 4, 5, or 6 sec. distributed equally and randomly over 20 baseline trials. The S's reaction turned off the stimulus light; reaction time was recorded by the E. Response latencies of more than 300 mlsec. activated a failure light on the S's panel. Trails within a block of five were separated by 20 sec. intervals; trial blocks by 2 min. After 20 baseline trials, Ss privately ranked each other in terms of reaction time. Each of the 30 groups of four Ss were told they were to work as a team. The members of the group with the most points would receive $10.00 each. To receive points, two or more members must press the reaction keys quickly enough to meet the criterion previously designated by the failure lights. If two or more members did so, the group was eligible to receive points. Each member would be assigned a different number of points to contribute to the group total "to maximize the highest possible scores for the group."

Males in Condition 1 and females in Condition 2 were told they were competing against groups of the same sex (same sex competition); females in Condition 3 were told they were competing against males (mixed sex competition) and that scores would be posted. Five trials were run under group instructions to accustom Ss to working without the failure signal. The E then randomly distributed counters to the Ss: 100 points, 80 points (high status), 40 points, and 20 points (low status). Personal and group goals were privately recorded

before each block of five trials. At the conclusion of the RT trials, Ss completed need achievement and fear of success protocols, and the Alpert-Haber (1960) anxiety test.

Results

Figure 1 shows the RT in mlsec. for high and low status males and females in Conditions 1 and 2 (no FOS arousal, same sex competition) and for high and low status females in Condition 3 (FOS arousal, mixed sex competition). The first point shown is the individual baseline RT for the fourth trial block with feedback; the second, is the RT for the fifth trial block, group instructions/no feedback; the last, is the RT for the tenth trial block which was run after the rank assignments had been made. The rank manipulations had a pronounced effect on performance with high ranks showing an improvement and low ranks, a decrement in Conditions 1 and 2. In Condition 3, both statuses improved in performance with high rank slightly more improved than low.

A factorial analysis of covariance controlling for individual baseline performance and performance under group instructions indicates that the status manipulations had a significant effect ($F(3,106) = 27.4$, $p < .001$). Condition was also significant ($F(2,106) = 10.9$, $p < .001$) with Conditions 1 and 2 significantly different from Condition 3. There was also a significant interaction between condition and rank ($F(6,106) = 4.5$, $p < .001$). In Scheffe comparison tests using adjusted means, high ranks in Condition 1 and 2 performed significantly better than low ($F(11,106) = 68.24$, $p < .001$) and Condition 3 females had significantly better scores in low rank than Condition 2 females ($F(11,106) = 21.22$, $p < .05$). Adjusted mean RT for males and females in Conditions 1 and 2 were similar in high rank and in low (a Scheffe comparison was not significant) although a factorial analysis of variance of individual

baseline RT indicates the males have significantly faster RT than females ($F(2,108) = 18.66$, $p < .001$). (Mean RT for individual baseline trials was 237.9 mlsec. for males, 286.0 mlsec. for females.)

A factorial analysis of variance on criterion performance (i.e., faster than 300 mlsec.) indicates that males (Condition 1) and females in Condition 3 met the criterion significantly more often than females in Condition 2 ($F(2,108) = 24.1$, $p < .001$). The females in Condition 2 showed some effect of rank on criterion performance, i.e., higher rank, more frequent meeting of criterion.

Table 1 shows the means for criterion performance, individual and group aspirations, n Ach, anxiety, and number of FOS responses. Criterion performance and personal aspirations are significantly correlated at .74, $t = 3.5$, $p < .01$ with performance exceeding aspirations. A repeated measures ANOVA indicates that group aspirations are significantly higher than personal ($F(1,108) = 14.45$, $p < .001$). Group goals are not significantly different. Achievement scores were slightly higher in high status than in low (not significantly) in Conditions 1 and 2, but were similar in both statuses in Condition 3. Anxiety scores were slightly lower in high status than in low in same sex competition, but higher in high status and lower in low status in mixed sex competition (not significantly).

Males had significantly faster RT in baseline trials than females ($F(2,108) = 18.66$, $p < .001$); set their personal goals significantly higher than females ($F(2,108) = 4.82$, $p < .01$); and were significantly higher than females in combined group and personal aspirations ($F(2,108) = 4.24$, $p < .01$).

In high status, mixed sex competition did not depress performance as expected when compared to females in Condition 2, but goal setting and n Ach were depressed and anxiety increased as expected. In low status, FOS arousal had an unexpected effect, it improved performance. Low status females in Condition 3

had significantly better scores than low status females in Condition 2 ($F(11,106) = 21.22$, $p < .05$). The performance of low status females in Condition 3 was similar to the performance of high status Ss in Conditions 1, 2, and 3. Low status females in Condition 3 had somewhat higher personal and group goals than females in Condition 2 although lower than males in Condition 1 (see Table 1). Also their n Ach scores were somewhat higher than either low status males or females in the no FOS arousal condition, and their anxiety scores tended ($p < .10$) to be lower, the lowest, in fact, of Ss in any status.

The female FOS cue had a significantly higher FOS response from all Ss than the male cue in 2 x 2 sex by sex of cue chi square analysis (X^2 (1) = 4.42, $p < .05$) (Table 1). Same sex FOS cues elicited negative imagery from 47.5% of the females and 37.5% of the males and were not significantly effected by status or condition. To test the extent and reality of the perception of negative consequences as a result of success, cross-sexed cues were also given. Negative consequences for success of the opposite sex were more pronounced for the female cue than for the male. Cross sex cues yielded negative stories from 55% of the males to the female cue and negative stories from 35.5% of the females to the male cue of success.

Discussion

As a consequence of the experimental manipulations, there were significant changes in performance for both males and females in same sex competition, changes attributable to assignment of a given status or role. When assigned to high status both sexes improved in performance; when relegated to low status, both sexes suffered a decrement. The effect of status on performance can be seen as Ss maintaining performance consistent with their assigned status. These results support and extend Burnstein and Zajonc's (1965) findings and

and suggest that given the opportunity of high status both males and females will perform according to the role's expectations.

Even in mixed sex competition where high and low ranks similarly improved their performance, the overriding factor might have been that of "role," although the "role" or expected behavior pattern was a relatively new one, only recently permissable--a woman free to compete to the limits of her ability. This role might have been encouraged by the group dynamics of team competition and the support that comes from being part of a team. Perhaps, it was this new role with the accompanying support which negated the status effects observed in same sex competition. The mixed sex competition data seem to suggest that these female Ss tried harder; trying harder had become permissable behavior under these circumstances.

If one assumes that the results of status manipulations observed in this study are attributable to incentive, it can be argued that the Ss whose performances contribute little have less incentive to perform well than the Ss whose performances contribute substantially; hence, the significant status effects. In the mixed sex condition, all Ss had incentive to perform well to outperform their male competitors.

A related interpretation is that status effects on performance occur as a result of different role expectations that are implicit in different statuses or role, e.g., high status, faster RT. The Ss who perceive that the fate of others depends on their performance are also inclined to try harder (Berkowitz and Daniels, 1963; Thomas, 1957) and so in a sense fulfill their roles. In this view, low status Ss in same sex competition perceive positive incentive in not performing well (Klinger and McNelly, 1969) unless there is an overriding reason to do so. Thus, differences in performances

are not governed only by incentives but by differences in the direction in which incentives operate, i.e., differences in the range and kind of behaviors that will earn rewards or punishments (Whyte, 1943; Kahl, 1953; Coleman, 1960; McDill and Coleman, 1963).

Women's role enactment in the mixed sex competition negated the status effects and improved performance across ranks. However, the effect of the status manipulations can be seen in the somewhat depressed goal setting and need achievement and elevated anxiety scores in high status. In low status, FOS arousal motivated Ss to improve in performance despite their smaller contribution to the group product, and accordingly slightly raised their n Ach; but, perhaps because of their low status, and the fact that their performance was not as crucial to group success, their anxiety scores were somewhat lower. Perhaps in both statuses in Condition 3, the team RT effort was the more salient role because the competition was a male group and any adverse consequences for success would be mitigated by the anonymity of group participation.

Females seem to be as susceptible to status manipulations as males except when an overriding reason negates the status effect. Nonetheless, the study did reveal certain sex differences. Males have faster RT and set higher goals than females. This difference in RT performance might be related to the emphasis on sports as part of the typical male role and does not preclude the possibility that fast RT is role appropriate behavior for males. The males' significantly higher personal goals than females can be seen as simply indicative of the strong correlation between criterion performance and personal aspirations. But these significantly higher personal goals can also be interpreted as role supported behavior in a society that both rewards achievement and encourages high aspirations for males across situations but restricts

them for females (Stein and Bailey, 1973). Women's lower aspirations can also be seen simply as related to ability or less parsimoniously as a function of their role enactment. The latter interpretation is more consistent with the findings of other researchers who report lower goal setting for women than for men even on tasks on which women are known to do as well (e.g., anagrams) (Feather, 1968; 1968) or even better than men (e.g., academic grades or "feminine" tasks) (Crandall, 1969; Deaux and Emswiller, 1974). Women also perceive themselves as lower in ability (Nieze, 1975) than men do and perhaps these perceptions of ability influence expectations for success and in turn influence women's and men's role enactments.

Role enactments also seem to be related to the significantly greater FOS response to the female cue than to the male cue by both sexes. These data suggest that the FOS cues are assessing cultural stereotypes and attitudes about female and male achievement roles rather than strong intrapsychic phenomena. This interpretation is supported by the findings of other researchers (e.g., Monahan, Kuhn, and Shaver, 1974; Feather and Raphelson, 1974; Juran, 1976) and by the dramatic results of the present study.

In sum then: (1) significant changes in performance of both males and females are affected by the random assignment of a given status or role; (2) feedback on performance is not necessary for this effect although it may be necessary for goal setting that is commensurate with ability; (3) without feedback, criterion performance and personal aspirations are strongly related (with performance exceeding aspirations); (4) group goals are significantly higher than personal goals; and (5) mixed sex competition accelerates rather than retards female performance regardless of status. Further research is needed to explore the ramifications of these findings.

Reference Note

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Table 1

Means for Criterion Performance, Individual and Group Aspirations, Need Achievement, and Anxiety, and Number of Fear of Success Responses

Condition	Status	Criterion Performance	Aspirations Individual	Aspirations Group	N Ach	Anxiety	FOS Responses Cue Male	FOS Responses Cue Female
1 Male (N=40)	High	24.3	21.6	20.8	4.5	25.6	6	9
	Low	23.1	19.1	21.2	2.4	27.5	9	13
2 Female (N=40)	High	19.1	18.7	20.1	4.4	26.5	4	7
	Low	17.1	16.7	17.9	3.2	28.7	9	12
3 Female-FOS (N=40)	High	22.4	17.9	19.5	3.6	28.8	8	10
	Low	22.6	17.8	19.4	3.6	25.5	7	9

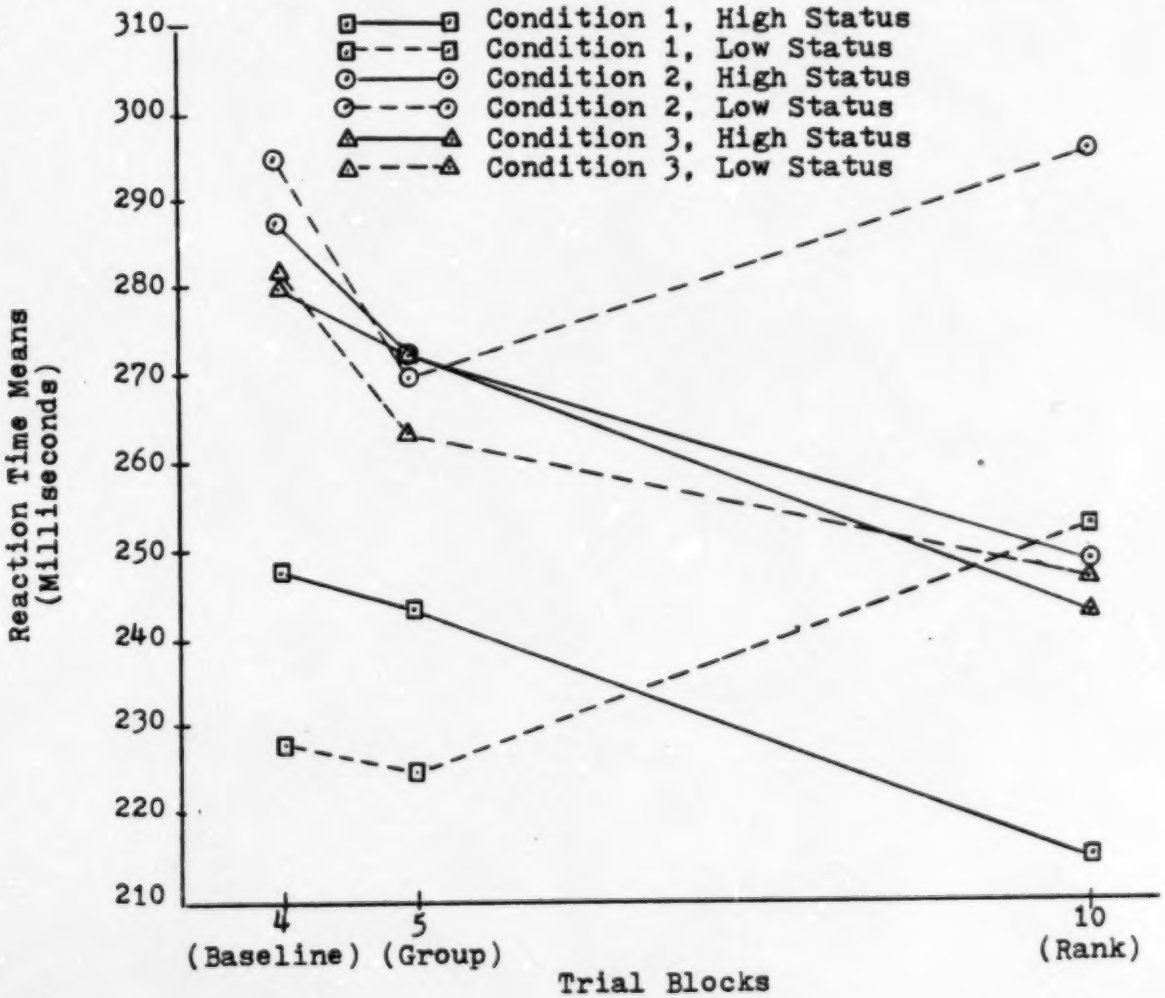

Figure 1. Reaction Time Performance Means for Individual Baselines, Group Effort, and Rank Assignments.